U.S. ENVIRONMENTAL PROTECTION AGENCY	EPA Registration No.	Date of Issuance:
AGENCI Office of Pesticide Programs Registration Division (7504P) 1200 Pennsylvania Ave., N.W. Washington, D.C. 20460	84930-15	<b>APR -</b> 5 201(
NOTICE OF PESTICIDE:	Term of Issuance: Conditional Regis	stration
☑ Registration □ Reregistration	Name of Pesticide Produ	ct:
(under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended)	ARC-LAMCY 2	
Name and Address of Registrant:		
ARCANA, LLC		
P.O. Box 26 Timnath, CO 80547		
Note: Ghanges in labeling differing in substance/itom/instaccepted in co and accepted by the Registration Division prior to use of the label in com	nnection with this registratio	mmusibesubmitted to
	nerce, infanyconcespondent	e on this productial wa
refer to the above BRA registration number.	nerce animany correspondent	eion this productalwa
refereto the above EPA registration number. On the basis of information furnished by the registrant, the above n Federal Insecticide, Fungicide and Rodenticide Act.		
On the basis of information furnished by the registrant, the above n Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or reco order to protect health and the environment, the Administrator, on h the registration of a pesticide in accordance with the Act. The accor registration of a product under this Act is not to be construed as give name or to its use if it has been covered by others.	amed pesticide is hereby a commendation of this produ- his motion, may at any tim eptance of any name in con- ving the registrant a right t	registered under the act by the Agency. I he suspend or cancel nuection with the to exclusive use of th
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shipment. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A copy of your label stamped "Accepted with Comments" is enclosed for your records. If you have any questions concerning this action, please contact Rosanna Louie at (703) 308-0037. Enclosure: - ARC-LAMCY 2 Label, Stamped Accepted with Comments Signature of Approving Official: Date: **APR -5** 2010 Mark Suarez Product Manager (13) Registration Division, Insecticide Branch

EPA Form 8570-6

1	STRICTED USE PESTICIDE CITY TO FISH AND AQUATIC ORGANISMS	
	tified Applicators, or persons under their direct su e Certified Applicator's certification.	pervision,
ACCEPTED ith COMMENTS EPA Letter Dated:	GROUP 3 INSE	CTICIDE
APR - 5 2010 r the Federal Insecticide, cide, and Rodenticide Act, hended, for the pesticide gred under EPA Reg. No. 34930 - 15	ARC-LAMCY 2 Itural and Turf and Ornamental Use	9 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
ACTIVE INGREDIENT Lambda-cyhalothrin [1a(S*),3a(Z)]-(±)-cyano-(3-phenoxypheny dimethylcyclopropanecarboxylate	(ا)methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-	,11.4%; <u>88.6%</u>
Contains 1 lb. of active ingredient per gallo Contains petroleum distillates.		100.0% '

# KEEP OUT OF REACH OF CHILDREN WARNING/AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID			
IF SWALLOWED	<ul> <li>Call a Poison control center or doctor immediately for treatment advice.</li> <li>Do not give any liquid to the person.</li> </ul>		
	• Do not induce vomiting unless told to do so by the poison control center or doctor.		
	<ul> <li>Do not give anything by mouth to an unconscious person.</li> </ul>		
IF IN EYES	<ul> <li>Hold eye open and rinse slowly and gently with water for 15 - 20 minutes.</li> </ul>		
	• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye		
	• Call a poison control center or doctor for treatment advice.		
IF ON SKIN OR	Take off contaminated clothing.		
CLOTHING	Rinse skin immediately with plenty of water for 15-20 minutes		
	Call a poison control center or doctor for treatment advice.		
IF INHALED	Move person to fresh air.		
	• If person is not breathing, call 911 or an ambulance, give artificial respiration immediately, preferably by mouth-to-mouth.		
	Call a poison control center or doctor for treatment advice.		
Note to Physician (	Contains petroleum distillates. Vomiting may cause aspiration pneumonia.		

Have the product container or label with you when calling a poison control center, doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time (NPIC Web site: <u>www.npic.orst.edu</u>). Outside of these times call your poison control center at 1-800-222-1222.

Manufactured For: ARCANA, LLC P.O. Box 26 Timnath, CO 80547 Net Contents: EPA Reg. No. 84930-EPA Est. No. Batch/Lot # \_\_\_\_\_

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PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals WARNING

May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash hands thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Remove contaminated clothing and wash before reuse

#### Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category G on an EPA chemical resistance category selection chart.

#### Applicators and Other Handlers Must Wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material such as Barrier Laminate, or Viton ≥14 mils
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

# ENGINEERING CONTROLS STATEMENT

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### **User Safety Recommendations**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE/clothing immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### **Environmental Hazards**

This pesticide is extremely toxic to fish and aquatic organisms and toxic to wildlife. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash waters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

#### **Physical and Chemical Hazards**

Combustible. Do not use or store near heat or open flame. Do not use this product in or on electrical equipment due to the possibility of shock hazard.

#### **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

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# FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR INSECT CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.

# AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

# Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical resistant gloves made of any waterproof material such as Barrier Laminate, or Viton ≥ 14 mils

#### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Keep adults, children, and pets off treated areas until spray has dried following the application.

### SPRAY DRIFT PRECAUTIONS

#### **BUFFER ZONES**

#### **Vegetative Buffer Strip**

Construct and maintain a minimum 10-foot-wide vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).

Only apply products containing lambda-cyhalothrin onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat.

For guidance, refer to the following publication for information on constructing and maintaining effective buffers:

Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services. USDA, NRCS. 2000. Fort Worth, Texas. 21 pp. www.in.nrcs.usda.gov/technical/agronomy/newconbuf.pdf

#### Buffer Zone for Ground Application (groundboom, overhead chemigation, or airblast)

Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

### Buffer Zone for ULV Aerial Application

Do not apply within 450 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds).

**Buffer Zone for Non-ULV Aerial Application** 

Do not apply within 150 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

#### SPRAY DRIFT REQUIREMENTS

#### Wind Direction and Speed

Only apply this product if the wind direction favors on-target deposition. Do not apply when the wind velocity exceeds 15 mph.

#### **Temperature Inversion**

Do not make aerial or ground applications into temperature inversions.

Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

#### **Droplet Size**

Use only Medium or coarser spray nozzles (for ground and non-ULV aerial application) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

#### ADDITIONAL REQUIREMENTS FOR GROUND APPLICATIONS

Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.

For ground boom applications, apply using a nozzle height of no more than 4 feet above the gorund or crop canopy.

For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

#### ADDITIONAL REQUIREMENTS FOR AERIAL APPLICATIONS

The spray boom should be mounted on the aircraft so as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of the wing span or 80% rotor diameter.

Flight speed and nozzle orientation must be considered in determining droplet size.

Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downward edge of the application area by adjusting the path of the aircraft upwind.

In the State of New York, a 25 ft. vegetated, non-cropped buffer strip untraversed by drainage tiles must be maintained between a treated field and a coastal salt marsh or stream that drains into a coastal salt marsh, for both aerial and ground application. For aerial applications, the 25 ft. vegetated non-cropped buffer strip for runoff protection would be part of the larger 150 ft. buffer strip (or 450 ft. buffer strip for ULV application) required for spray drift.

#### CHEMIGATION

#### Sprinkler Irrigation Application

Apply ARC-LAMCY 2 using rates and timing described on this label. Consultation with your local State Extension Service or other local experts may be useful for recommendations on which adjuvants or diluent types to use, (see Tank Mix Applications section) as well as for rates and mixing instructions. Ascertain that the recommendations have been proven, through university and extension field trials, to be effective with this product applied by chemigation.

Be sure the irrigation system is providing uniform application of water to all areas, because good control requires thorough coverage of foliage. Maintain continuous agitation in the pesticide supply tank before and during the entire application period.

Inject the recommended rate of ARC-LAMCY 2 into the irrigation system by means of a metering device that will provide a constant flow and distribute the product to the desired area in 0.1-0.2 inch of water. It is recommended that the minimum amount of water be used that will provide proper distribution and coverage. Inject the product into the main irrigation line ahead of a right angle turn in the line to insure adequate dispersion or mixing in the irrigation water. Following application, flush the entire irrigation and injection system with clean water before stopping it.

If application is being made during a normal irrigation set of a stationary sprinkler, inject the recommended rate of ARC-LAMCY 2 for the area covered into the system only during the end of the irrigation set for a sufficient time to provide adequate coverage and product distribution.

It is not recommended that ARC-LAMCY 2 be applied through an irrigation system connected to a public water system. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

#### **USE PRECAUTIONS: SPRINKLER IRRIGATION APPLICATION**

- A. Apply this product only through (sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move) irrigation system(s). Do not apply this product through any other type of irrigation system.
- B. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.
- C. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
- D. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- E. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
- F. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-resource contamination from backflow.
- G. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid toward the injection pump.
- H. The pesticide injection pipeline must also contain a functional, normally closed, solenoidoperated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- I. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- J. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- K. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- L. Do not apply when wind speed favors drift beyond the area intended for treatment.

M. Do not apply through chemigation systems connected to public water systems.

#### GENERAL DIRECTIONS FOR USE

Thorough crop coverage is necessary for both initial and residual control. Apply by ground in at least 10 gal/A or by air in at least 2 gal/A using sufficient water to obtain full coverage of foliage unless this label specifies otherwise. In situations where foliage is dense or pest pressure is high (heavier insect or egg pressure, larger larval stages), control can be improved by use of higher application volumes and/or higher use rates.

For cutworm control, ARC-LAMCY 2 may be applied before, during, or after planting. When making soil incorporated applications, use higher rates for better control.

#### **Resistance Management**

Lambda-Cy EC Insecticide – RUP is a Group 3 Insecticide (contains the active ingredient lambdacyhalothrin). Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state agricultural authorities for details.

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternative method of control for your area.

#### **Tank Mix Applications**

ARC-LAMCY 2 may be tank mixed with other currently registered pesticides unless expressly prohibited by the product label. Adjuvants such as spreader stickers, wetting agents, and penetrants may also be added. Use a small volume mixing test with the other products to confirm compatibility. If other chemicals are added to the applicator tank, ARC-LAMCY 2 should be added last. Fill tank to desired volume and continue to agitate while making applications. If mixed with EC formulations, use within 24 hours. Observe all restrictions and precautions found on labels of products in the tank mix.

**CROP USES AND SPRAY RECOMMENDATIONS** 

ALFALFA, ALFALFA GROWN FOR SEED				
Pests	Rate ARC-LAMCY 2	Remarks		
	per Acre			
Alfalfa Caterpillar	0.015-0.025 lb. a.i.	See additional instructions below.		
Army Cutworm	(1.92-3.20 fl. oz.)			
Cutworm spp.		<sup>1</sup> Use higher rates for large larvae		
Green Cloverworm		<sup>2</sup> Suppression only.		
Leafhopper spp.		<sup>3</sup> See resistance statement under General		
Looper spp.		Directions for Use.		
Threecornered Alfalfa Hopper		<sup>4</sup> Does not include Western Flower Thrips.		
Velvetbean Caterpillar				
Webworm spp.				
Alfalfa Seed Chalcid (Adult)	0.02-0.03 lb. a.i.	Do not apply more than 0.03 lb. a.i. (0.24 pt.		
Alfalfa Weevil	(2.56-3.84 fl. oz.)	or 3.84 fl. oz of product)/A per cutting.		
Armyworm				
Bean Leaf Beetle (Adult)		Do not apply more than 0.12 lb. a.i. (0.96 pt.		
Blister Beetle spp.		or 15.36 fl. oz. of product)/A per season.		
Blue Alfalfa Aphid				
Clover Leaf Weevil spp.		Do not apply within 1 day of harvest for		
Clover Root Borer (Adult)		forage or within 7 days of harvest for hay.		
Clover Root Curculio spp. (Adult)				
Clover Stem Borer (Adult)				

#### FALEA ALEALEA CROWN FOR SEED

Corn Earworm		
Cowpea Aphid		
Cowpea Curculio (Adult)		
Cowpea Weevil (Adult)		
Cucumber Beetle spp. (Adult)		
Egyptian Alfalfa Weevil		
Fall Armyworm		
Grape Colaspis (Adult)		
Grasshopper spp.		
Green June Beetle (Adult)		
Green Peach Aphid <sup>3</sup>		
Japanese Beetle (Adult)		
Meadow Spittlebug		
Mexican Bean Beetle		Ì
Pea Aphid		
Pea Weevil (Adult)		
Plant Bug spp. including Lygus spp. <sup>3</sup>		
Spotted Alfalfa Aphid		
Stink Bug spp.		
Sweet Clover Weevil (Adult)		
Thrips spp. <sup>4</sup>		
Western Yellowstriped Armyworm		
Whitefringed Beetle spp. (Adult)		
Yellowstriped Armyworm		
Beet Armyworm <sup>1,3</sup>	0.03 lb. a.i.	
Blotch Leafminer <sup>3</sup>	(3.84 fl. oz.)	
Spider Mites <sup>2</sup>		

9063

Use scouting to determine need for applications. Base the timing and frequency of applications on the timing when insect populations reach local economic thresholds.

Apply by ground or air using enough water to obtain full coverage of foliage. Apply in at least 2 gal./A by air or 10 gal/A by ground. In situations of dense foliage and/or high pest populations, use 5-10 gal/A by air or 20 gal./A by ground and higher use rates. Also use higher rates for improved residual control.

Avoid application when bees are actively foraging by applying during the early morning or during the evening hours. Be aware of bee hazard resulting from a cool evening and/or morning dew. It may be advisable to remove bee shelters during and for 2-3 days following application. Avoid direct application to bee shelters.

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Pests	Rate ARC-LAMCY 2 per Acre	Remarks
Armyworm spp.	0.015-0.03 lb. a.i.	See additional instructions below.
Cabbage Seedpod Weevil	(1.92-3.84 fl. oz.)	
Cutworm spp.		Do not apply within 7 days of harvest.
Diamondback Moth		Do not apply more than 0.09 lb. a.i.(0.72 pt. or
Flea Beetle		11.52 fl. oz. of product)/A per year.
Grasshoppers		
Looper spp.		
Lygus Bug		
Cabbage Aphid	0.03 lb. a.i.	
	(3.84 fl. oz.)	
Use scouting to determine need for an applications on when insect populatio Apply by air or ground with enough v For air applications, apply a minimum	ns reach local economic threshold vater to obtain full coverage of foli	

Pests	R	ate ARC-LAM 1,000 ft of R				Remarks	
Corn Rootworm L (Western, North Southern, Mexid Cutworm spp. Lesser Cornstalk E Red Imported Fire Seedcorn Beetle Seedcorn Maggot Wireworm spp. <sup>1</sup> White Grub spp.	ern, can) Borer	0.005 lb. a (0.66 fl. oz		fee Dc oz. Fo mc pro Fo pts and Fo as fur or Fo sec the wh Ap	ed within 21 days o not apply more to of product)/A per r field corn. pope ore than 0.12 lb. a oduct)/A per crop r sweet corn do n s. or 61.44 fl. oz o d foliar applicatio r Banded Applica a 5-7 inch T-band row between the as a band applica r In-Furrow Apple ed furrow through planter furrow o neel.	orn, and seed corn .i. (0.96 pts. or 15. from at plant and ot apply more than if product)/A per co- ms. and the apple tions – Make apple d sprayed across the furrow openers an- tion behind the pre- ications – Make apple ispray nozzles or ri- peners and in front of 3 gal. finished sp	tion. 72 pt. or 11.52 fl. do not apply 36 fl. oz of foliar applications. 0.48 lb. a.i. (3.84 rop from at plant ication at planting e open seed d the press wheels ss wheel. oplication into the nicrotubes, behind a of the press
<sup>2</sup> lbs. a.i. and fl. oz				1. 07			
Row Spacing	40"	38"	36"		34"	32"	30"
Linear ft./A	13,068	13,756	14,520		15,374	16,335	17,424
lbs. a.i./A	0.067	0.07	0.075		0.079	0.084	0.09
fl. oz./A	8.6	9.1	9.6		10.1	10.8	11.5

# CEREAL GRAINS – CORN (AT PLANT): FIELD CORN, POPCORN, SEED CORN, SWEET CORN

10043

# CEREAL GRAINS - CORN (FOLIAR): FIELD CORN, POPCORN, SEED CORN

Pests	Rate ARC-LAMCY 2	Remarks
	per Acre	
Corn Earworm <sup>1</sup>	0.015-0.025 lb. a.i.	See additional instructions below.
Cutworm spp.	(1.92-3.20 fl. oz.)	<sup>1</sup> For control before the larva bores
Green Cloverworm		into the plant stalk or ear.
Meadow Spittlebug		<sup>2</sup> Use higher rates for large larvae.
Western Bean Cutworm <sup>1</sup>		<sup>3</sup> Suppression only.
		<sup>4</sup> See resistance statement under
		General Directions for Use.
Armyworm <sup>2</sup>	0.02-0.03 lb. a.i.	Do not apply within 21 days of
Bean Leaf Beetle	(2.56-3.84 fl. oz.)	harvest.
Bird Cherry-Oat Aphid <sup>3</sup>		Do not allow livestock to graze in
Cereal Leaf Beetle		treated areas or harvest treated corn
Corn Leaf Aphid <sup>3</sup>		forage as feed for meat or dairy
Corn Rootworm Beetle (Adult beetles		animals within 1 day after treatment.
including Mexican, Northern,		Do not feed treated corn fodder or
Southern, Western)		silage to meat or dairy animals within
English Grain Aphid <sup>3</sup>		21 days after last treatment.
European Corn Borer <sup>1</sup>		Do not apply more than 0.12 lb. a.i.
Fall Armyworm <sup>2</sup>		(0.96 pt. or 15.36 fl. oz. of
Flea Beetle spp.		product)/A per crop from at plant and
Grasshopper spp.		foliar applications.
Hop vine Borer <sup>1</sup>		Do not apply more than 0.06 lb. a.i.

Japanese Beetle (Adult) Lesser Cornstalk Borer Sap Beetle (Adult) Seedcorn Beetle Southwestern Corn Borer <sup>1</sup> Stalk Borer <sup>1</sup> Stink Bug spp.		<ul> <li>(0.48 pt. or 7.68 fl. oz. of product) after silk initiation.</li> <li>Do not apply more than 0.03 lb. a.i.</li> <li>(0.24 pt. or 3.84 fl. oz. of product)/A after corn has reached the milk stage (yellow kernels with milky fluid).</li> </ul>
Tobacco Budworm <sup>1.4</sup>		
Webworm spp.		
Yellowstriped Armyworm <sup>2</sup>		
Beet Armyworm <sup>4</sup>	0.03 lb. a.i.	
Chinch Bug	(3.84 fl. oz.)	
Green Bug <sup>3.4</sup>		
Mexican Rice Borer <sup>1</sup>		
Rice Stalk Borer <sup>1</sup>		
Southern Corn Leaf Beetle <sup>3</sup>		
Sugarcane Borer		
Use scouting or locally prescribed corn growth	stages to determine need for	application, usually at intervals of 7 or more

Use scouting or locally prescribed corn growth stages to determine need for application, usually at intervals of 7 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds or other locally recommended methods.

Apply by ground or air using sufficient water and application methods to obtain full coverage of target location. When applying by air, apply in at least 2 gal. of water/A.

For chinch bug control, begin application when bugs migrate from small grains or grass weeds to small corn and direct the spray to the base of corn plants. Make additional applications at 3-5 day intervals if needed. ARC-LAMCY 2 may only suppress heavy infestations and/or subsequent migrations.

For control of adult corn rootworm beetles (*Diabrotica* spp.) as part of an aerial applied corn rootworm control program use at least 3.84 fl. oz./A (0.03 lb. a.i./A).

Pests	Rate ARC-LAMCY 2	Remarks
	per Acre	
Aphid spp. <sup>2.3</sup>	0.02-0.03 lb. a.i.	See additional instructions below.
Armyworm <sup>1</sup>	(2.56-3.84 fl. oz.)	<sup>1</sup> Use higher rates for large larvae.
Aster Leafhopper		<sup>2</sup> Suppression only.
Beet Armyworm <sup>1,3</sup>		<sup>3</sup> See resistance statement under General
Cereal Leaf Beetle		Directions for Use.
Chinch Bug		
Common Cornstalk Borer		Do not apply within 1 day of harvest.
Corn Rootworm Beetle (Adult beetles		
including Mexican, Northern,		Do not allow livestock to graze in
Southern, Western)		treated areas or harvest treated corn
Corn Earworm		forage as feed for meat or dairy animals
Cutworm spp.		within 1 day after last treatment. Do
European Corn Borer		not feed treated corn fodder or silage to
Fall Armyworm <sup>1</sup>		meat or dairy animals within 21 days
Flea Beetle spp.		after last treatment.
Grasshopper spp.		
Japanese Beetle (Adult)		Do not apply more than 0.48 lb. a.i.
Sap Beetle (Adult)		(3.84 pt. or 61.44 fl. oz. of product)/A
Southern Armyworm <sup>1</sup>		per crop from at plant and foliar
Southwestern Corn Borer		applications.
Spider Mite spp. <sup>2</sup>		
Stink Bug spp.		
Tarnished Plant Bug		
Yellowstriped Armyworm <sup>1</sup>		
Western Bean Cutworm		
Webworm spp.		
Corn Silkfly (Adult) <sup>2</sup>	0.03 lb. a.i.	

# CEREAL GRAINS – SWEET CORN (FOLIAR)

Green Bug<sup>2.3</sup>

(3.84 fl. oz.)

Use scouting or locally prescribed corn growth stages to determine need for application, usually at intervals of 4 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds. For best results target control before insects enter the stalk or ear.

Apply ground or air using enough water and application methods to obtain full coverage of foliage and ears (if present). When applying by air, apply in at least 2 gal. of water per acre.

For control of adult corn rootworm beetles (*Diabrotica* spp.) as part of an aerial applied corn rootworm control program use a minimum of 0.025 lb. a.i (3.2 fl. oz.)/A.

### **CEREAL GRAINS - RICE AND WILD RICE**

Pests	Rate ARC-LAMCY 2 per	Remarks
	Acre	
Bird Cherry-Oat Aphid	0.025-0.04 lb. a.i.	See additional instructions below.
Chinch Bug	(3.20-5.12 fl. oz.)	
Fall Armyworm		<sup>1</sup> For control before the larvae bore into the plant
Grasshopper spp.		stalk.
Green Bug		Do not release flood water within 7 days of an
Leafhopper spp.	1	application.
Rice Stink Bug		Do not apply more than $0.12$ lb $oi$ (0.06 pt or
Riceworm		Do not apply more than 0.12 lb. a.i. (0.96 pt. or 15.36 fl. oz, of product)/A per season.
Rice Water Weevil (Adult)		Do not apply more than 0.08 lb. a.i. $(0.64 \text{ pt.})/\text{A}$
Sharpshooter spp.		within 28 days of harvest or more than 0.04 lb. a.i.
True Armyworm		(0.32 pt.)/A within 21 days of harvest.
Yellowstriped Armyworm		
Yellow Sugarcane Aphid		Do not apply within 21 days of harvest.
European Corn Borer <sup>1</sup>	0.03 - 0.04	
Mexican Rice Borer <sup>1</sup>	(3.84 – 5.12 fl. oz.)	Do not use treated rice fields for the aquaculture of
Rice Seed Midge		edible fish and crustacea.
Rice Stalk Borer <sup>1</sup>		Do not apply as an ultra-low volume (ULV) spray.
Sugarcane Borer <sup>1</sup>		bo not apply as an anta-low volume (OEV) spray.

Mixers/loaders supporting aerial applications to wild rice at a rate of 0.04 lb. a.i./A, and treating 1200 acres (or more) per day must wear a dust-mist respirator.

Use scouting to determine timing of need for application and the need for repeat applications, usually at 5-7 day intervals. Base the timing and frequency of applications on when insect populations reach local economic thresholds.

ARC-LAMCY 2 can be safely used when propanil products are being used for weed control.

Apply by air or ground using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gal. of water (or a total carrier volume)/A but ensure that application is made in sufficient volume to provide adequate coverage. When applying at lower volumes by air, the addition of an emulsifiable crop oil (e.g. 1 pt./A) is recommended to help improve coverage, reduce evaporation, and improve efficacy.

For control of rice water weevil in dry seeded rice, make a foliar application as indicated by scouting for the presence of adults and/or feeding scars, usually within a time-frame of 0-5 days after permanent flood establishment. Do not allow more than 10 days to elapse from starting permanent flood until insecticide application unless scouting indicates weevils have not been previously present. Treatment of adults may also be made at later stages of rice development to reduce overwintering populations.

For control of rice water weevil in water seeded rice, make the first foliar application after pinpoint flood as indicated by scouting for the presence of adults and/or feeding scars, usually when rice has emerged 1/2 inch above the waterline. When there is prolonged migration into the field, begin field scouting for adults and/or feeding scars 3-5 days after the first treatment and, if needed, make a second application within 7-10 days of the first application. Treatment of adults may also be made at later stages of rice development to reduce overwintering populations.

**California:** In addition to the directions above for control of rice water weevil in water seeded rice, ARC-LAMCY 2 may be applied at the 1-3 leaf growth stage, with the majority at the 2 leaf growth stage. Adults are vulnerable both on levees and in the water. Larvae are vulnerable while feeding on the leaves before they enter the soil. Monitor for adults, based upon field history and density of population. Monitor field edges and levee areas for adults, then treat in one of the following ways: 1) spray the inside perimeter of the field, or 2) spray the entire field.

Because Green bug is known to have many biotypes, it is possible that ARC-LAMCY 2 may only provide suppression. If the first application of ARC-LAMCY 2 does not give satisfactory control, a resistant biotype may be present and use of an alternate chemistry may be necessary.

For control of stem borers, scout fields when rice growth is near panicle differentiation for early symptoms of damaging populations. This damage will be exhibited as discoloration (orange-tan) around the junction of the leaf sheath and leaf blade which is caused by feeding of young larvae within the sheath. Applications must be made before larvae bore into rice stems. Make the first application at panicle differentiation to 2 inch panicle for partial control. Make the second application at boot to heading for maximum control. All rice varieties are susceptible to stem borer damage, but Cocodrie and Priscilla are particularly susceptible.

Pests	Rate ARC-LAMCY 2	Remarks
	per Acre	
Cutworm spp.	0.015-0.02 lb. a.i.	See additional instructions below.
Sorghum Midge	(1.92-2.56 fl. oz.)	
		<sup>1</sup> Use higher rates for large larvae.
		<sup>2</sup> For control before the larva bores into the
Armyworm	0.02-0.03 lb. a.i.	plant stalk.
Beet Armyworm <sup>3</sup>	(2.56-3.84 fl. oz.)	<sup>3</sup> See resistance statement under General Directions
Corn Earworm		for Use.
European Corn Borer <sup>2</sup>		
Fall Armyworm <sup>1</sup>		Do not apply more than 0.08 lb. a.i. (0.64 pt. or 10.24 fl.
Flea Beetle spp.		oz. of product)/A per season.
Grasshopper spp.		
Lesser Cornstalk Borer <sup>2</sup>		Do not apply more than 0.06 lb. a.i. (0.48 pt. or 7.68 fl. oz
Southwestern Corn Borer <sup>2</sup>	1	of product)/A per season after crop emergence.
Stink Bug spp.		
Webworm spp.		Do not apply more than 0.02 lb. a.i. (0.16 pt. or 2.56 fl. oz
Yellowstriped		of product)/A per season once crop is in soft dough stage.
Armyworm <sup>1</sup>		Do not apply within 30 days of harvest.
A they worth		
Chinch Bug	0.03 lb. a.i.	
Mexican Rice Borer <sup>2</sup>	(3.84 fl. oz.)	
Sugarcane Borer <sup>2</sup>		
	for treatment, usually at interva	Is of 5 or more days. Base the timing and frequency of
applications on when insect pop	ulations reach local economic th	hresholds.
		hods to obtain full coverage of target location. When
applying by air, apply in at least		
For sorghum midge control, ma	ke first application when one qu	arter of the sorghum heads have emerged and are in tip

# CEREAL GRAINS - SORGHUM (GRAIN)

bloom. If needed, repeat applications at 5-day intervals. For chinch bug control, start applications when bugs migrate from small grains or grass weeds to small sorghum, directing spray to the base of sorghum plants. If needed, repeat applications at 3-5 day intervals.

ARC-LAMCY 2 may only suppress heavy infestations and/or subsequent migrations.

# CEREAL GRAINS – WHEAT, WHEAT HAY, TRITICALE, BARLEY, BUCKWHEAT, OATS, AND RYE

Pests	Rate ARC-LAMCY 2 per Acre	Remarks
Army Cutworm Cutworm spp.	0.015-0.025 lb. a.i. (1.92-3.20 fl. oz.)	See additional instructions below. <sup>1</sup> Best control is obtained before insects begin to roll leaves. Once crop has started to boot, ARC- LAMCY 2 may provide suppression only. Higher rates and increased coverage will be necessary. <sup>2</sup> Supprssion only. <sup>3</sup> See resistance statement under General Directions for Use. <sup>4</sup> Make application when adults emerge.
Armyworm Bird Cherry-Oat Aphid <sup>1</sup> Cereal Leaf Beetle	0.02-0.03 lb. a.i. (2.56-3.84 fl. oz.)	Do not apply within 30 days of harvest.

	)	) 140	H?
English Grain Aphid <sup>1</sup>		Do not apply more than 0.06 lb. a.i. (0.48 pt. or	
Fall Armyworm		7.68 fl. oz. of product)/A per season.	
Flea Beetle spp.			
Grasshopper spp.		Do not allow livestock to graze in treated areas	
Hessian Fly <sup>4</sup>		or harvest treated wheat forage as feed for meat	
Orange Blossom Wheat Midge		or dairy animals within 7 days after treatment. Do not feed treated straw to meat or dairy	
Russian Wheat Aphid <sup>1</sup>		animals within 30 days after last treatment.	
Stink Bug spp.		annuas wann 50 days arter last treatment.	
Yellowstriped Armyworm			
Grass Sawfly	0.025-0.03 lb. a.i.		
-	(3.20-3.84 fl. oz.)		
Chinch Bug	0.03 lb. a.i.		
Corn Leaf Aphid <sup>2</sup>	(3.84 fl. oz.)		
Greenbug <sup>1,3</sup>			
Mite spp. <sup>2</sup>	<u> </u>		

Use scouting to determine need for treatment, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds.

Apply by ground or air using enough water and application methods to obtain full coverage of foliage. When applying by air, apply in at least 2 gal. of water/A.

For chinch bug control, repeat applications at 3-5 day intervals if needed. ARC-LAMCY 2 may only suppress heavy infestations and/or migrations.

Because Greenbug is known to have many biotypes, it is possible that ARC-LAMCY 2 may only provide suppression. If this occurs, a second application using an alternative chemistry may be needed.

#### COLE CROPS -- BROCCOLI, BRUSSELS SPROUTS, CABBAGE, CAVALO BROCCOLO, CAULIFLOWER, CHINESE BROCCOLI (GAI LON), CHINESE CABBAGE (NAPA), CHINESE **MUSTARD CABBAGE (GAI CHOY), KOHLRABI**

Pests	Rate ARC-LAMCY 2	Remarks
	per Acre	
alfa Looper	0.015-0.025 lb. a.i.	See additional instructions below.
bage Looper	(1.92-3.20 fl. oz.)	<sup>1</sup> For control of first and second instars only.
bage Webworm		<sup>2</sup> Suppression only.
worm spp.		<sup>3</sup> See resistance statement under General
oorted Cabbageworm		Directions for Use.
thern Cabbageworm		
nid spp. <sup>2,3</sup>	0.02-0.03 lb. a.i.	Do not apply within 1 day of harvest.
nyworm	(2.56-3.84 fl. oz.)	
et Armyworm <sup>1.3</sup>		Do not apply more than 0.24 lb. a.i. (1.92 pt. o
n Earworm		30.72 fl. oz. of product)/A per season.
mondback Moth <sup>3</sup>		
Armyworm <sup>1</sup>		
a Beetle spp.		
sshopper spp.		
anese Beetle (Adult)		
fhopper spp.		
adow Spittlebug		
nt Bug spp. – including		
Lygus spp. <sup>3</sup>		
der Mite spp. <sup>2</sup>		
nk Bug spp.		
rips spp. <sup>2</sup>		
getable Weevil (Adult)		
itefly spp. <sup>2,3</sup>		
lowstriped Armyworm		
scouting to determine need for appl lications on when insect populations	reach local economic thresh	f 5 or more days. Base the timing and frequer olds.

Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gals.

# of water/A.

Pests	Rate ARC-LAMCY 2	Remarks
	per Acre	
Cutworm spp.	0.015-0.02 lb. a.i.	See additional instructions below.
Soybean Thrips	(1.92-2.56 fl. oz.)	<sup>1</sup> For control of first and second instars only.
Tobacco Thrips		<sup>2</sup> Suppression only.
Cabbage Looper	0.02-0.03 lb. a.i.	<sup>3</sup> See resistance statement under General
Cotton Fleahopper	(2.56-3.84 fl. oz.)	Directions for Use.
Cotton Leafperforator		Do not apply within 21 days of harvest.
Cotton Leafworm		
Lygus Bug spp. <sup>3</sup>		Do not graze livestock in treated areas.
Pink Bollworm		
Saltmarsh Caterpillar		Do not apply more than 0.2 lb. a.i (1.6 pt. or 25.6
•	0.025.0.04.11	fl. oz. of product)/A per season.
Bandedwing Whitefly <sup>2,3</sup>	0.025-0.04 lb. a.i.	Do not make more than a total of 10 synthetic
Beet Armyworm <sup>1,3</sup>	(3.20-5.12 fl. oz.)	pyrethroid applications (of one product or
Boll Weevil		combination of products) to a cotton crop in one
Brown Stink Bug		growing season.
Cotton Aphid <sup>2,3</sup>		
Cotton Bollworm		
European Corn Borer		
Fall Armyworm		
Green Stink Bug		
Southern Green Stink Bug		
Sweetpotato Whitefly <sup>2,3</sup>		
Tobacco Budworm <sup>3</sup>		
Twospotted Spider Mite <sup>2</sup>	1	
		ays. Base the timing and frequency of applications
on when insect populations reach local eco Apply ground or air using enough water to		
		JLV sprays. ARC-LAMCY 2 may be mixed with
once-refined vegetable oil and applied in a		
		z. of product)/A may be applied in conjunction with

intense field monitoring.

For boll weevil, spray on a 3-5 day schedule.

When applied according to the directions above for control of cotton bollworm and tobacco budworm, ARC-LAMCY 2 also provides ovicidal control of unhatched *Heliothis* species eggs.

#### CUCURBIT VEGETABLES – CHAYOTE (fruit), CHINESE WAXGOURD, CITRON MELON, CUCUMBER, GHERKIN, GOURD (edible), MOMORDICA spp., MUSKMELON, PUMPKIN, SQUASH (summer and winter), WATERMELON

Pests	Rate ARC-LAMCY 2	Remarks
	per Acre	
Armyworm spp.	0.02-0.03 lb. a.i.	See additional instructions below.
Blister Beetle spp.	(2.56-3.84 fl. oz.)	<sup>1</sup> See resistance statement under General
Cabbage Looper		Directions for Use.
Corn Earworm		<sup>2</sup> Western Flower Thrips are not included.
Cricket spp.		<sup>3</sup> Suppression only.
Cucumber Beetle species		
(adults)		
Cutworm spp.		Do not apply within 1 day of harvest.
Flea Beetle spp.		
Grasshopper spp.		Do not apply more than 0.18 lb. a.i (1.44 pt. or 23 fl.
June Beetle spp.		oz.)/A per season.
Leaffooted Bug		
Leafhopper spp.		
Lygus Bug spp. <sup>1</sup>		
Melonworm		

		· col
Pickleworm		
Plant Bug spp.		
Rindworm species complex		
Saltmarsh Caterpillar		
Squash Beetle		
Squash Bug spp.		
Squash Vine Borer spp.		
Stink Bug spp.		
Thrips spp. <sup>1, 2</sup>		
Tobacco Budworm		
Webworm spp.		
Aphid spp. <sup>1</sup>	0.03 lb. a.i.	7
Leafminer spp. <sup>1,3</sup>	(3.84 fl. oz.)	
Spider Mite spp. <sup>3</sup>		
Whitefly spp. <sup>1,3</sup>		
The second	11	

Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds.

Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gals. of solution per acre. When applying by ground, apply in a minimum of 10 gals. of solution per acre.

Use higher application volumes and/or application rates when foliage is dense, larvae are large, pest populations are high, size of plants increases, or weather conditions are adverse. Use higher rates for longer residual.

Insects that tunnel or bore into leaves, stems, vines, or fruit must be controlled before penetration. Only insects (larvae and adults) exposed to the product can be controlled with foliar applications of Lambda-Cy EC Insecticide - RUP.

# FRUITING VEGETABLES – TOMATO, TOMATILLO, PEPPERS (BELL AND NONBELL), EGGPLANT, GROUND CHERRY, PEPINO

Pests	Rate ARC-LAMCY 2	Remarks
	per Acre	
Cabbage Looper	0.015-0.025 lb. a.i.	See additional instructions below.
Cutworm spp.	(1.92-3.20 fl. oz.)	<sup>1</sup> For control of first and second instars only.
Hornworm spp.		<sup>2</sup> Suppression only.
Aphid spp. <sup>2,3</sup>	0.02-0.03 lb. a.i.	<sup>3</sup> See resistance statement under General
Beet Armyworm <sup>1,3</sup>	(2.56-3.84 fl. oz.)	Directions for Use.
Blister Beetle spp.		<sup>4</sup> For control before the larva bores into the
Colorado Potato Beetle <sup>3</sup>		plant stalk or fruit.
Cucumber Beetle spp. (Adult)		<sup>5</sup> Does not include Western Flower thrips.
European Corn Borer <sup>4</sup>		
Fall Armyworm <sup>1</sup>		Do not apply within 5 days of harvest.
Flea Beetle spp.		
Grasshopper spp.		Do not apply more than 0.36 lb. a.i. (2.88 pt.
Japanese Beetle (Adult)		or 46.08 fl. oz. of product)/A per season.
Leafhopper spp.		
Leafminer spp. <sup>2</sup>		
Meadow Spittlebug		
Pepper Weevil (Adult) <sup>2</sup>		
Plant Bug spp.		
Southern Armyworm <sup>1</sup>		
Spider Mite spp. <sup>2</sup>		
Stalk Borer <sup>4</sup>		
Stink Bug spp.		
Thrips <sup>5</sup>		
Tobacco Budworm <sup>3</sup>		
Tomato Fruitworm		
Tomato Pinworm		
Tomato Psyllid <sup>2,3</sup>		
Vegetable Weevil (Adult)		
Whitefly spp. <sup>2,3</sup>		
Yellowstriped Armyworm <sup>1</sup>		
Use scouting to determine need for appl	ication, usually at intervals of 5 or	more days. Base the timing and frequency of

Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of

applications on the timing when insect populations reach local economic thresholds. Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gal. of water/A.

TOF3

Pests	Rate ARC-LAMCY 2	Remarks
	per Acre	
Army Cutworm Cutworm spp. Essex Skipper Range Caterpillar Striped Grass Looper	0.015-0.025 lb. a.i. (1.92-3.2 fl. oz.)	See additional instructions below. <sup>1</sup> Best control is obtained before insects begin to roll leaves. <sup>2</sup> See resistance statement under General Directions for Use.
		<ul> <li><sup>3</sup> Suppression only.</li> <li><sup>4</sup> Greenbug is known to have many biotypes.</li> <li>Lambda-Cy EC Insecticide - RUP may provide suppression only. A second application using alternative chemistry may be needed.</li> </ul>
		Pasture and rangeland grass may be used for grazing or cut for forage 0 days after application. Do not cut grass to be dried and harvested for hay until 7 days after the last application.
		Grass grown for seed: Straw and mature seed (seed screenings) may be used as feed 7 days after the last application. Regrowth of grass grown for seed may be used for grazing, cut for forage or cut to be dried and harvested for hay.
		Do not apply more than 0.03 lb. a.i (0.24 pt. or 3.84 fl. oz.)/A per cutting for pastures, rangeland, and grasses grown for seed. A minimum re-treatment interval (RTI) of 30 days is required for pastures and rangeland receiving 0.03 lb. a.i./A which have not been cut between applications.
Beet Armyworm Billbug spp. <sup>3</sup> Bird Cherry-Oat Aphid. <sup>1</sup>	0.02 - 0.03 lb. a.i. (2.56 - 3.84 fl. oz.)	Do not apply more than 0.09 lb. a.i. (0.72 pt. or 11.52 fl. oz. of product) per acre per season.
Black Grass Bug		11.52 fr. 02. of product) per acre per season.
Black Turfgrass Beetle (adult) Blue Stem Midge		
Cereal Leaf Beetle		
Chinch Bug Crane Fly spp.		
Cricket spp. English Grain Aphid <sup>1</sup>		
Fall Armyworm		
Flea Beetle spp.		
Grass Mealybug Grass Sawfly (adult)		
Grasshopper spp.		
Green June Beetle (adult) Greenbug <sup>1, 2, 4</sup>		
Japanese Beetle (adult)		
Katydid spp.		
Leafhopper spp. Mite spp. <sup>3</sup>		

# GRASS FORAGE, FODDER, AND HAY – PASTURE AND RANGELAND GRASS, GRASS GROWN FOR HAY OR SILAGE, AND GRASS GROWN FOR SEED

Russian Wheat Aphid <sup>1</sup>	<u></u>	<u></u>		
Southern Armyworm				
Spittlebug spp.				
Stink Bug spp.				
Sugarcane Aphid				
Thrips spp.				
Tick spp.				
True Armyworm				
Webworm spp.				
Yellowstriped Armyworm			 	

Use scouting to determine application requirements. Base the timing and frequency of applications on when insect populations reach local economic thresholds.

Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gals. of water per acre. When applying by ground, apply in a minimum of 7 gals. of water per acre.

Use higher application volumes and/or application rates when foliage is dense, larvae are large, pest populations are high, or weather conditions are adverse. Use higher rates for longer residual.

For chinch bug control, Lambda-Cy EC Insecticide - RUP may only suppress heavy infestations and/or migrations. In these situations, a second application using alternative chemistry may be needed.

#### LEGUME VEGETABLES (BEANS AND PEAS):

**EDIBLE PODDED (ONLY)**: Canavalia gladiata – sword bean; Canavalia ensiformis – jackbean; *Glycine max* – soybean (immature seed).

**EDIBLE PODDED, SUCCULENT SHELLED OR DRIED SHELLED**: *Phaseolus* spp. – includes field, kidney, lima, navy, pinto, runner, snap, tepary, and wax beans; *Vigna* spp. – includes adzuki, asparagus, moth, mung, rice, urd and yardlong beans, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, and Southern pea; *Pisum* spp. – includes dwarf, edible-pod, English, field, garden, green, snow, and sugar peas; *Cajanus cajan* – Pigeon pea.

SUCCULENT SHELLED OR DRIED SHELLED: Vica faba – broadbean (fava bean).

**DRIED SHELLED (ONLY)**: Lupinus spp. – includes grain, sweet, white and sweet white lupines; Cicer arietimum – chickpea (garbanzo bean), Cyamopsis tetraganoloba – guar, Lablab pupureus – Lablab bean (hyacinth bean), Lens esculata – lentils.

Pests	Rate ARC-LAMCY 2	Remarks
	per Acre	
Cutworm spp.	0.015-0.025 lb. a.i.	See additional instructions below.
Green Cloverworm	(1.92-3.20 fl. oz.)	For control before the larva bores into the
Imported Cabbageworm		plant stalk or pods.
Mexican Bean Beetle		<sup>2</sup> Use higher rates for large larvae.
Saltmarsh Caterpillar		<sup>3</sup> For suppression only.
Velvetleaf Caterpillar		<sup>4</sup> See resistance statement under General
Alfalfa Caterpillar	0.02-0.03 lb. a.i.	Directions for Use.
Aphid spp. <sup>4</sup>	(2.56-3.84 fl. oz.)	<sup>5</sup> Does not include Western Flower Thrips
Armyworm <sup>2</sup>		
Bean Leaf Beetle		For edible podded and succulent shelled legume
Bean Leafskeletonizer		vegetables, do not apply within 7 days of
Blister Beetle spp.		harvest.
Corn Earworm		For dried shelled legume vegetables, do not
Corn Rootworm Beetle spp. (Adult)		apply within 21 days of harvest.
Cucumber Beetle spp. (Adult)		
Curculio and Weevil spp. <sup>1</sup>		Do not apply more than 0.12 lb. a.i. (0.96 pt. or
(foliage and pod feeding adults and		15.36 fl. oz. of product)/A per season.
larvae)		
European Corn Borer		For succulent and dried shelled peas and beans,
Fall Armyworm <sup>2</sup>		do not graze livestock in treated areas or harvest vines for forage or hay.
Flea Beetle spp. (Adult)		vines for forage of hay.
Flea Hopper spp.		
Grasshopper spp.		
Japanese Beetle (Adult)		
Leafhopper spp.		
Leaftier spp.		

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Looper spp.	······	
Meadow Spittlebug		
Painted Lady Butterfly (Larva)		
Plant Bug spp. including Lygus spp. <sup>4</sup>		
Stalk Borer <sup>1</sup>		
Stink Bug spp.		
Threecornered Alfalfa Hopper		
Thrips spp. <sup>4,5</sup>		
Tobacco Budworm <sup>4</sup>		
Webworm spp.		
Western Bean Cutworm		
Western Yellowstriped Armyworm <sup>2</sup>		
Yellowstriped Armyworm <sup>2</sup>		
Beet Armyworm <sup>3.4</sup>	0.03 lb. a.i.	
Leafminer spp. <sup>3,4</sup>	(3.84 fl. oz.)	
Lesser Cornstalk Borer <sup>3</sup>		
Soybean Looper <sup>3,4</sup>		
Spider Mite spp. <sup>3</sup>		
Whitefly spp. <sup>3,4</sup>		
Use scouting to determine need for application,	usually at intervals of 5 or r	more days. Base the timing and frequency of
applications on when insect populations reach l		
Apply by ground or air using enough water to o water/A.	btain full coverage of foliag	e. When applying by air, apply in at least 2 gal. of

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# LEGUME VEGETABLES: SOYBEANS

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Pests	Rate ARC-LAMCY 2 per	Remarks
Bean Leaf Beetle Cabbage Looper Corn Earworm Corn Rootworm Beetle (Adult beetles including Mexican, Northern, Southern, Western) Cutworm spp. Green Cloverworm Mexican Bean Beetle Painted Lady (Thistle) Caterpillar Potato Leafhopper Saltmarsh Caterpillar	Rate ARC-LAMCY 2 per Acre 0.015-0.025 lb. a.i. (1.92-3.20 fl. oz.)	See additional instructions below. <sup>1</sup> Use higher rates for large larvae. <sup>2</sup> Suppression only. <sup>3</sup> See resistance statement under General Directions for Use. <sup>4</sup> Use lower rates for early season applications and/or lighter populations. <sup>5</sup> Does not include Western Flower Thrips. Do not apply within 30 days of
Soybean Aphid <sup>4</sup> Threecornered Alfalfa Hopper Thrips spp. <sup>5</sup> Velvetbean Caterpillar Woolybear Caterpillar		harvest. Do not apply more than 0.06 lb. a.i. (0.48 pt.)/A per season.
Armyworm <sup>1</sup> Blister Beetle spp. European Corn Borer Fall Armyworm <sup>1</sup> Grasshopper spp. Japanese Beetle (Adult) Plant Bug spp. Silverspotted Skipper Stink Bug spp. Tobacco Budworm <sup>3</sup> Webworm spp. Yellowstriped Armyworm <sup>1</sup>	0.025-0.03 lb. a.i. (3.20-3.84 fl. oz.)	

		and a start of the
Beet Armyworm <sup>2,3</sup>	0.03 lb. a.i.	
Lesser Cornstalk Borer <sup>2</sup>	(3.84 fl. oz.)	
Soybean Looper <sup>2.3</sup>		
Spider Mite spp. <sup>2</sup>		
Use scouting to determine need for applications on when insect populations re	each local economic thresholds.	ys. Base the timing and frequency of
Do not graze or harvest treated soybean for		
	r to obtain full coverage of foliage. Whe	n applying by air, apply in at least 2 gal. of
water/A.		

For control of adult corn rootworm beetles (*Diabrotica* spp.) as part of an aerial applied to corn rootworm control program use at least 2.56 fl. oz./A of product (0.02 lb. a.i./A).

# LETTUCE (HEAD AND LEAF)

Pests	Rate ARC-LAMCY 2	Remarks
	per Acre	
Alfalfa	0.015-0.025 lb. a.i.	See additional instructions below.
Cabbage Looper	(1.92-3.20 fl. oz.)	<sup>1</sup> For control of first and second instars only.
Cutworm spp.		<sup>2</sup> Suppression only.
Green Cloverworm		<sup>3</sup> See resistance statement under General
Imported Cabbageworm		Directions for Use.
Saltmarsh Caterpillar		
Aphid spp. <sup>2,3</sup>	0.02-0.03 lb. a.i.	Do not apply within 1 day of harvest.
Armyworm	(2.56-3.84 fl. oz.)	
Beet Armyworm <sup>1.3</sup>		Do not apply more than 0.3 lb. a.i. (2.4 pt. or
Corn Earworm		38.4 fl. oz. of product)/A per season.
Diamondback Moth <sup>3</sup>		
European Corn Borer		
Fall Armyworm <sup>1</sup>		
Flea Beetle spp.		
Grasshopper spp.		
Japanese Beetle (Adult)		
Leafhopper spp.		
Meadow Spittlebug		
Plant Bug spp. including Lygus spp. <sup>3</sup>		
Southern Armyworm		
Spider Mite spp. <sup>2</sup>		
Stink Bug spp.		
Tobacco Budworm <sup>3</sup>		
Vegetable Weevil (Adult)		
Whitefly spp. <sup>2,3</sup>		
Use scouting to determine need for application		e days. Base the timing and frequency of
applications on when insect populations reach		
	obtain full coverage of foliage.	When applying by air, apply in at least 2 gal. of
water/A.		

Pests	Rate ARC-LAMCY 2 per Acre	Remarks
Cutworm spp.	0.015-0.025 lb. a.i.	See additional instructions below.
Leafminer spp. (Adult)	(1.92-3.20 fl. oz.)	<sup>1</sup> For control of first and second instars only.
Onion Maggot (Adult)		<sup>2</sup> Suppression only.
Seedcorn Maggot (Adult)		<sup>3</sup> See resistance statement under General
Aphid spp. <sup>2</sup>	0.02-0.03 lb. a.i.	Directions for Use.
Armyworm spp. <sup>1</sup>	(2.56-3.84 fl. oz.)	
Flower Thrips <sup>2,3</sup>		Do not apply within 14 days of harvest.
Onion Thrips <sup>3</sup>		
Plant Bug spp.	· · · · · · · · · · · · · · · · · · ·	Do not apply more than 0.24 lb. a.i. (1.92 pt. or

# **ONION (BULB) AND GARLIC**

- A	
Stink Bug spp.	30.72 fl. oz. of product)/A per season.
Tobacco Thrips <sup>3</sup>	
Western Flower Thrips <sup>2,3</sup>	
Use scouting to determine need for application, usual applications on when insect populations reach local	ally at intervals of 5 or more days. Base the timing and frequency of economic thresholds.
Use the higher label rates as thrips population increa	
Apply by ground or air using enough water and appl apply in at least 2 gal. of water/A.	lication methods to obtain full coverage of foliage. When applying by air,

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To control thrips by aerial application, the addition of 1% COC v/v,  $\frac{1}{4}$ % NIS v/v or a silicone adjuvant (follow manufacturer's use directions) may improve the deposition of the spray and increase plant coverage.

# PEANUT

Pests	Rate ARC-LAMCY 2 per	Remarks
	Acre	
Cutworm spp.	0.015-0.025 lb. a.i.	See additional instructions below.
Green Cloverworm	(1.92-3.20 fl. oz.)	<sup>1</sup> Use higher rates for large larvae.
Potato Leafhopper		<sup>2</sup> Suppression only.
Rednecked Peanut Worm		<sup>3</sup> See resistance statement under General
Threecornered Alfalfa Leafhopper		Directions for Use.
Velvetbean Caterpillar		
Bean Leaf Beetle	0.02-0.03 lb. a.i.	
Corn Earworm	(2.56-3.84 fl. oz.)	Do not apply within 14 days of harvest.
Fall Armyworm <sup>1</sup>		
Grasshopper spp.		Do not apply more than 0.12 lb. a.i. (0.96 pt.
Southern Corn Rootworm (Adult)		or 15.36 fl. oz. of product)/A per season.
Stink Bug spp.		
Tobacco Thrips		
Vegetable Weevil		
Whitefringed Beetle (Adult)		
Aphid spp. <sup>2</sup>	0.03 lb. a.i.	
Beet Armyworm <sup>2,3</sup>	(3.84 fl. oz.)	
Lesser Cornstalk Borer <sup>2</sup>		
Soybean Looper <sup>2,3</sup>		
Spider Mite <u>spp</u> . <sup>2</sup>		
		e days. Base the timing and frequency of applications
on when insect populations reach local eco		

Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gal. of water/A.

# POME FRUITS – APPLE, CRABAPPLE, LOQUAT, MAYHAW, ORIENTAL PEAR, PEAR, QUINCE

Pests	Rate ARC-LAMCY 2	Remarks
	per Acre	
Apple Aphid	0.02-0.04 lb. a.i.	See additional instructions below.
Apple Maggot (Adult)	(2.56-5.12 fl. oz.)	<sup>1</sup> Suppression only.
Cherry Fruit Fly spp. (Adult)		
Coding Moth		Do not apply within 21 days of harvest.
Green Fruitworm		
Japanese Beetle		Do not apply more than 0.2 lb. a.i. (1.6 pt. or
Leafhopper spp.		25.6 fl. oz. of product)/A per year.
Leafroller spp.		
Lesser Appleworm		Do not apply more than 0.16 lb. a.i. (1.28 pt.
Omnivorous Leafroller		or 20.48 fl. oz. of product)/A per year post
Orange Tortrix		bloom.
Oriental Fruit Moth		
Pear Psylla <sup>1</sup>		
Pear Sawfly		

Periodical Cicada	······	
Plant Bug spp.		
Plum Curculio		
Rosy Apple Aphid		
San Jose Scale (fruit infestations only)		
Spirea Aphid <sup>1</sup>		
Stink Bug spp.		
Tent Caterpillar spp.		
Tentiform Leaf Miner spp.		
Tree Borer spp.		
Tufted Apple Budworm		
Webworm spp.		
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Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds and IPM recommendations.

Apply by ground or air using enough water to obtain full coverage of the foliage or target area. When applying by air, apply in at least 5 gal. of water per acre, but use higher volumes as appropriate for thorough coverage.

# STONE FRUITS – APRICOT, SWEET CHERRY, TART CHERRY, NECTARINE, PEACH, PLUM, CHICKASAW PLUM, DAMSON PLUM, JAPANESE PLUM, PLUMCOT, PRUNE

Pests	Rate ARC-LAMCY 2 per	Remarks
	Acre	
American Plum Borer	0.02-0.04 lb. a.i.	See additional instructions below.
Apple Maggot (Adult)	(2.56-5.12 fl. oz.)	
Black Cherry Aphid		Do not apply within 14 days of harvest.
Cherry Fruit Fly spp. (Adult)		
Codling Moth		Do not apply more than 0.2 lb. a.i. (1.6 pt.
Green Fruitworm		or 25.6 fl. oz. of product)/A per year. Do
Japanese Beetle		not apply more than 0.16 lb. a.i. (1.28 pt. or
June Beetle		20.48 fl. oz. of product)/A per year post
Leafhopper spp.		bloom.
Leafroller spp.		
Oriental Fruit Moth		
Peachtree Borer spp.		
Peach Twig Borer		
Pear Sawfly		
Periodical Cicada		
Plant Bug spp.		
Plum Curculio		
Rose Chafer		
Stink Bug spp.		
Tent Caterpillar spp.		
Thrips spp.		
on when insect populations reach local econor	nic thresholds and IPM recommend	ays. Base the timing and frequency of applications ations. or target area. When applying by air, apply at least
5 gal, of water per acre, but use higher volume		

5 gal. of water per acre, but use higher volumes as appropriate for thorough coverage.

#### SUGARCANE

Pests	Rate ARC-LAMCY 2 per	Remarks
	Acre	
Mexican Rice Borer <sup>1</sup>	0.025-0.04 lb. a.i.	See additional instructions below.
Pygmy Mole Cricket	(3.20-5.12 fl. oz.)	<sup>1</sup> For control before the larva bores into the plant stalk.
Rice Stalk Borer <sup>1</sup>		<sup>2</sup> Suppression only of beetles active above ground.
Sugarcane Aphid <sup>3</sup>		<sup>3</sup> See resistance statement under General Directions for
Sugarcane Beetle (Adult) <sup>2</sup>		Use.
Sugarcane Borer <sup>1</sup>		
West Indian Cranefly		Do not apply within 21 days of harvest.

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<sup>7</sup> Sugarcane Aphid <sup>3</sup>	Do not apply more than 0.16 lb. a.i. ( of product)/A per season.	1.28 pt. or 20.48 fl. oz.

Use scouting to determine need for application, usually at intervals of 7 or more days. Base the timing and frequency of applications on when insect populations reach local economic threshold.

Apply by ground or air using enough water to obtain full coverage of the foliage or target area. When applying by air, apply at least 2 gal. of water/A.

#### SUNFLOWER

Yellow

Target Pests	Rate ARC-LAMCY 2	Remarks
Cuthurs and	per Acre	See additional instructions below.
Cutworm spp.	0.015-0.025 lb. a.i.	
Sunflower Beetle	(1.92-3.20 fl. oz.)	<sup>1</sup> Use higher rates for large larvae.
		<sup>2</sup> Suppression only.
		<sup>3</sup> See resistance statement under General
Banded Sunflower Moth	0.02-0.03 lb. a.i.	Directions for Use.
Fall Armyworm <sup>1</sup>	(2.56-3.84 fl. oz.)	
Grasshopper spp.		Do not apply within 45 days of harvest.
Head-Clipper Weevil (Adult)		
Japanese Beetle (Adult)	ł	Do not apply more than 0.12 lb. a.i. (0.96 pt. or
Leafhopper spp.		15.36 fl. oz. of product)/A per season. Do not
Meadow Spittlebug		apply more than 0.09 lb. a.i. (0.72 pt. or 11.52 fl.
Painted Lady (Thistle) Caterpillar		oz. of product)/A per season after bloom
Seed Weevil (Adult)		initiation.
Spotted Cabbage Looper		
Stem Weevil (Adult)		Do not apply as an Ultra Low Volume (ULV)
Stink Bug spp.		spray.
Sunflower Maggot (Adult)		
Sunflower Moth		
Woolybear Caterpillar		
Beet Armyworm <sup>2,3</sup>	0.03 lb. a.i.	
Spider Mite spp. <sup>2</sup>	(3.84 fl. oz.)	
		nore days. Base the timing and frequency of applications
on when insect populations reach local eco		

on when insect populations reach local economic thresholds. Apply by ground or air using enough water to obtain full coverage of sunflower heads and/or foliage. When applying by air, apply in at least 2 gal. of water/A.

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Pests	Rate ARC-LAMCY 2	Remarks
	per Acre	
Armyworm spp. <sup>1</sup>	0.015-0.03 lb. a.i.	See additional instructions below.
Blister Beetle spp.	(1.92-3.84 fl. oz.)	<sup>1</sup> For control of first and second instars only.
Cabbage Looper		<sup>2</sup> Suppression only.
Corn Earworm		<sup>3</sup> See resistance statement under General
Cucumber Beetle spp. (Adult)		Directions for Use.
Cutworm spp.		
Grasshopper spp.		Do not apply within 40 days of harvest.
Japanese Beetle (Adult)		
Katydid spp.		Do not apply more than 0.09 lb. a.i. (0.72 pt. or
Plant Bug spp. <sup>3</sup>		11.52 fl. oz. of product)/A per year.
Potato Tuberworm		
Saltmarsh Caterpillar		
Stinkbug spp.		
Tobacco Aphid spp. <sup>2,3</sup>		
Tobacco Budworm <sup>3</sup>		
Tobacco Flea Beetle (Adult)		
Tobacco Hornworm		
Tobacco Thrips spp. <sup>2</sup>		

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Tomato Hornworm	
Tree Cricket spp.	
Vegetable Weevil (Adult)	
Webworm spp.	
Use scouting to determine need for application	tion, usually at intervals of 7 or more days. Base the timing and frequency of
applications on when insect populations re	ach local economic thresholds.
	to obtain full coverage of the foliage. When applying by air, apply in at least 2 gal. of
water/A	

# TREE NUTS – ALMOND, BEECH NUT, BRAZIL NUT, BUTTERNUT, CASHEW, CHESTNUT, CHINQUAPIN, FILBERT (HAZELNUT), HICKORY NUT, MACADAMIA NUT (BUSH NUT), PISTACHIO, WALNUT-BLACK, WALNUT-ENGLISH (PERSIAN), PECAN

per Acre	
0.02-0.04 lb. a.i.	See additional instructions below.
(2.56-5.12 fl. oz.)	
	Do not apply within 14 days of harvest.
	Do not apply more than 0.16 lb. a.i. (1.28 pt
	or 20.48 fl. oz. of product)/A per year.
	Do not apply more than 0.12 lb. a.i. (0.96 pt
	or 15.36 fl. oz. of product)/A per year post
	bloom.
	0.02-0.04 lb. a.i

Apply by ground or air using enough water to obtain full coverage of the foliage or target area. When applying by air, apply in at least 5 gal. of water per acre, but use higher rates as appropriate for thorough coverage.

#### TUBEROUS AND CORM VEGETABLES – ARRACACHA, ARROWROOT, ARTICHOKE (Chinese and Jerusalem only), CANNA (edible), CASSAVA (bitter and sweet), CHAYOTE (root), CHUFA, DASHEEN, GINGER, LEREN, POTATO, SWEET POTATO, TANIER, TURMERIC, YAM (bean and true)

Pests	Rate ARC-LAMCY 2 per Acre	Remarks
Cutworm spp. Leafhopper spp. Saltmarsh Caterpillar Sweet Potato Hornworm Woolybear Caterpillar spp.	0.015-0.025 lb. a.i. (1.92-3.2 fl. oz.)	See additional instructions below. <sup>1</sup> See resistance statement under General Directions for Use. <sup>2</sup> Does not include Western Flower Thrips. <sup>3</sup> Suppression only.
Aphid spp. <sup>1</sup> Armyworm spp. <sup>1</sup> Blister Beetle spp. Colorado Potato Beetle <sup>1</sup> Corn Earworm Cricket spp.	0.02-0.03 lb. a.i. (2.56-3.84 fl. oz.)	Do not apply within 7 days of harvest. Do not apply more than 0.12 lb. a.i. (0.96 pt. or 15.36 fl. oz. of product) per acre per season.

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Cucumber Beetle spp. (adults)			
European Corn Borer			
Flea Beetle spp. (adults)			
Grasshopper spp.			
Looper spp. <sup>1</sup>			1
Lygus Bug spp. <sup>1</sup>			
Plant Bug spp.			
Potato Psyllid			
Potato Tuberworm			
Stink Bug spp.			
Sweet Potato Leaf Beetle			
(adults)			
Sweet Potato Vine Borer			
Thrips spp. <sup>1,2</sup>			1
Tortoise Beetle spp.			
Webworm spp.			
Weevil spp. (adults)			
Leafminer spp. <sup>1.3</sup>	0.03 lb. a.i.		
Whitefly spp. <sup>1.3</sup>	(3.84 fl. oz.)		
Spider Mite spp. <sup>3</sup>	. ,		
Use scouting to determine need for appl	ication, usually at intervals of	7 or more days. Base the timing and frequer	ncy of

applications on when insect populations reach local economic thresholds. Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gals.

of water per acre. When applying by ground, apply in a minimum of 10 gals. of water per acre.

Use higher application volumes and/or application rates when foliage is dense, larvae are large, pest populations are high, plant size increases, or weather conditions are adverse. Use higher rates for longer residual.

Insects that tunnel or bore into leaves, vines, stems, tubers, or corms must be controlled before penetration. Only exposed insects (larvae and/or adults) can be controlled with foliar applications of Lambda-Cy EC Insecticide - RUP.

# CONIFER AND DECIDUOUS TREES – PLANTATIONS AND NURSERIES

Pests	Rate ARC-LAMCY 2 per	Remarks	
	Acre		
Bagworm	0.02-0.04 lb. a.i.	See additional instructions below.	
Balsam Twig Aphid	(2.56-5.12 fl. oz.)	<sup>1</sup> Suppression only.	
Balsam Wooly Aphid			
Birch Leafminer		Do not apply more than 0.24 lb. a.i. (1.92 pt.	
Black Pine Weevil		or 30.72 fl. oz. of product)/A per year.	
Elm Leaf Beetle			
European Elm Leaf Beetle			
Gypsy Moth			
Japanese Beetle			
June Beetle spp.			
Leaf Beetle spp.			
Leafroller spp.			
May Beetle spp.			
Mealybug spp. <sup>1</sup>			
Pales Weevil			
Pine Chafer			
Pine Colaspis Beetle			
Pine Conelet Bug			
Pine Leaf Chermid			
Pine Needle Scale			
Pine Sawfly spp.			
Pine Tip Moth spp.			
Pine Tortoise Scale			
Pine Weevil spp.			
Poplar Aphid spp.			
Sawfly spp.			
Spittlebug spp.			

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Spruce Budworm		1
Tent Caterpillar spp.		
Tussock Moth spp.		
Webworm spp.		
		eed, and bark feeding insects. Base the timing and
frequency of applications on when insect pe		
Apply by ground or air using enough water	to obtain full coverage of target site	. When applying by air, apply in at least 2 gal. of
water/A.		

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# **CONIFER AND DECIDUOUS TREES – SEED ORCHARDS**

Pests	Rate ARC-LAMCY 2 per Acre	Remarks
Coneworm spp.	See Remarks	For high volume sprayers, dilute 5.12 fl. oz. of
Seed Bug spp.		product per 100 gal. of water and apply 5-10
Thrips spp.		gal. of finished spray per tree.
		For low volume sprayers, dilute 20 fl. oz. of
		product per 100 gal. of water and apply 100
		gal. of finished spray per acre.
		For aerial applications, apply 15 fl. oz. of
		product per acre in a minimum of 10 gal. of
		finished spray per acre.
		Do not apply more than 0.5 lb. a.i. (4 pt. or 64
		fl. oz. of product)/A per year.

# NON-CROPLAND (EXCLUDING PUBLIC LAND)

Pests	Instructions
See crop instructions in sections above for specific pest and rate information	Spray non-cropland adjacent to agricultural areas to control insects which may migrate to and threaten crops. Follow the General Directions for Use instructions, application
pest and rate information	rates, and spray recommendations found elsewhere on this label for the adjacent crop outlet and target pests. When foliage is dense/large, insect populations are high or larval stages are large, use
	the highest labeled rate for that crop-pest combination. Repeat as necessary to maintain control.
	Do not apply more than 0.2 lb. a.i. (1.6 pt. or 25.6 fl. oz. of product)/A per year.
	Do not graze livestock in treated areas.

	Treated Acres/Gal	66	50	40	33	25
·	pt./A	0.12	0.16	0.20	0.24	0.32
Γ	fl. oz./A	1.92	2.56	3.20	3.84	5.12
	lb. a.i./A	0.015	0.02	0.025	0.03	0.04

### **Rate Conversion Chart**

### TURF AND ORNAMENTALS

ARC-LAMCY 2 may be used for applications to ornamentals grown in commercial greenhouses, shade houses, and nurseries, and turf grown on sod farms or for commercial seed production.

ARC-LAMCY 2 may be used for applications to maintain indoor or outdoor areas where turf and ornamentals are grown, such as residential landscape areas and non-residential landscapes around institutional, public, commercial, and industrial buildings, parks, recreational areas, golf courses, and athletic fields.

ARC-LAMCY 2 may also be used for applications to golf course fairways, greens, greens aprons, and tee areas.

**IMPORTANT:** Time application to flowering plants during periods when pollinating insects are not present, such as early morning or late evening.

Do not apply this product through any type of irrigation system for turf and ornamental uses. Do not apply this product to edible crops or crops grown for food/feed when applied to turf or ornamentals. Do not apply this product by aerial application for turf and ornamental uses.

### SPRAY DRIFT PRECAUTIONS

Observe restrictions found elsewhere on this label. Do not make applications when wind speed is 15 miles per hour or greater. Low humidity and high temperatures increase the likelihood of spray drift to sensitive areas. Avoid spraying during conditions of low humidity and/or high temperature. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when the wind direction is toward the aquatic area. Do not make outdoor applications during temperature inversions. Inversions are characterized by stable air and increasing temperature with height above ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

# APPLICATION

ARC-LAMCY 2 mixes easily with water and may be used in all types of application equipment. Mix product with the required amount of water and apply as a dilute application to the point of runoff. Apply product using spray nozzles which produce a coarse droplet size. Formation of very small droplets may be minimized by appropriate nozzle selection and by avoiding excessive spray pressure. For application to plants like holly, pine, or ivy which have hard-to-wet foliage, add a spreader-sticker to enhance knockdown and increase residual activity. If application is made as a concentrate or mist-type application, use the same amount of product as would be used in a dilute application.

### MIXING

ARC-LAMCY 2 is to be diluted with water for spray application and may be used in all types of application equipment. First fill application tank with <sup>1</sup>/<sub>2</sub> - <sup>3</sup>/<sub>4</sub> volume of water. It is suggested that the pH of the water be between 5 and 7; use a buffering agent if necessary to adjust the pH. Next slowly add ARC-LAMCY 2 to the applicator tank water with maximum agitation. Finally, fill tank to desired volume and continue to agitate while making applications. If application is interrupted, agitate or re-suspend spray solution before resuming sprays. Always add ARC-LAMCY 2 last if other chemicals are to be added to the applicator tank. If mixed with EC formulations or oils, use within 24 hours. Make up only amount of application volume as required. See mixing charts below.

Desired Rate of ARC-LAMCY 2 per 100 gal.	25 gallons spray tank	50 gallons spray tank	100 gallon spray tank	200 gallon. spray tank	300 gallon spray tank
1.3 oz.	0.33 oz.	0.65 oz.	1.3 oz.	2.6 oz.	4.0 oz.
2.6 oz.	0.65 oz.	1.3 oz.	2.6 oz.	5.2 oz.	7.9 oz.
4.4 oz.	1.1 oz.	2.2 oz.	4.4 oz.	8.8 oz.	13.3 oz.

ARC-LAMCY 2Mixing Chart for Ornamental Insect Pest Control	
(ARC-LAMCY 2 to add per spray tank)	

ARC-LAMCY 2 Mixing Chart for Turf Insect Pest Control (ARC-LAMCY 2 to add per 100 gallon spray tank)

Rate of ARC- LAMCY 2	2 gals.	4 gals.	6 gals.	8 gals.	10 gals.
4.4 oz./A	5.0 oz.	2.5 oz.	1.7 oz.	1.2 oz.	1.0 oz.
8.8 oz./A	10.0 oz.	5.0 oz.	3.3 oz.	2.5 oz.	2.0 oz.
17.6 oz./A	20.0 oz.	10.0 oz.	6.7 oz.	5.0 oz.	4.0 oz.

Conversion Rate: 1 Fluid ounce (fl. oz.) equals 29 milliliters (mL).

# COMPATIBILITY

ARC-LAMCY 2 has been found to be compatible with most commonly used fungicides, miticides, liquid fertilizers, and other insecticides. Use a jar test to check physical compatibility using the correct proportion of products if local experience is unavailable.

**Note:** While phytotoxicity testing has been carried out on a wide range of ornamental plants under various environmental conditions, and no phytotoxicity has been observed, certain cultivars may be sensitive to the final spray solution. It is advised to prespray a selection of ornamental plants and observe them for 7-10 days prior to treating large areas if local use experience is unavailable.

#### **USE DIRECTIONS**

#### ORNAMENTALS

Ornamentals in Greenhouses, Shadehouses, and Nurseries Ornamentals (including Trees, Shrubs, Flowers, Evergreens, Foliage Plants, and Ground Covers) in Residential Landscaped Areas and Landscaped Areas Around Institutional, Public, Commercial, and Industrial Buildings, Parks, Recreational Areas, Golf Courses, and Athletic Fields

Pest	Rate of ARC-	in Courses, and Atmetic Freids
	LAMCY 2 per	Instructions
	100 gallons	
Ants (Including Imported	1.3-4.4 fl oz.	Begin application to ornamentals before high insect
fire ants)		pest populations become established. Reapply as
Aphids	(38-128 mL)	necessary to keep pest populations under control, using
Armyworms	, ,	higher rates as pest pressure increases.
Azalea caterpillars		Good spray coverage is necessary to provide the most
Bagworms		effective level of control. For ornamentals with waxy,
Black vine weevils (adult)		hard-to-wet foliage, add a spreader-sticker at
Boxelder bugs		recommended rates to enhance the control of insects.
Budworms		
California Oakworms		For spot treatments, use 0.44 fl. oz. ARC-LAMCY 2
Cankerworms		per 1-2.5 gallons of water.
Cockroaches		
Crickets		Apply at 7- day intervals if retreatment is necessary.
Cutworms		
Eastern tent caterpillars		Do not apply more than 0.36 lb. of the active ingredient
Elm leaf beetles		(46 fl. oz. of product) per acre per year.
European sawflies		
Fall webworms		Consult your state university or local Cooperative
Flea beetles		Extension Service office for specific pest control
Forest tent caterpillars		application timing in your area.
Gypsy moth larvae		
Japanese beetles (adult)		Bagworm: Apply ARC-LAMCY 2 when bagworm
June beetles (adult)		larvae begin to hatch and spray directly on the larvae.
Lace bugs		Control will be best if the larvae are young.
Leaf-feeding caterpillars		20 1 0 1 1 1 1 1 1 1 1 0
Leafhoppers		<sup>2</sup> Scale: Cover the plant thoroughly with ARC-
Leafminers, (adult)		LAMCY 2 spray, including trunks, stems, twigs, and
Leaf rollers		foliage.
Leaf skeletonizers		
Midges		
Mosquitoes Oleander moth larvae		
Pillbugs		
Pine sawflies		
Pine shoot beetles		
Pinetip moths		
Plant bugs		
Root weevils		
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Sawflies	
Scale insects $(crawlers)^2$	
Spiders	
Spittlebugs	
Striped beetles	
Striped oakworms	
Thrips	
Tip moths	
Tussock moth larvae	
Wasps	
Broadmites	2.6-4.4 fl. oz.
Brown softscales	
California redscales	(75-128 mL)
(crawler)	
Clover mites	
Mealybugs	
Pine needlescales	
(crawler)	
Spider mites	
Whiteflies	

# TURFGRASS

Sod Farms

Lawns around Residential, Institutional, Public, Commercial, and Industrial Buildings, Parks, Recreational Areas, Golf Courses, and Athletic Fields, Golf Course and Athletic Field Turf

Pest	Amount of ARC-	Instructions
	LAMCY 2	
Ants (Including Imported fire	2.9-6 ml/1,000 sq. ft.	Begin application to turf before the establishment
ants)		of high insect pest populations and before
Armyworms	(4.4-8.8 fl. oz./A)	significant turf damage has occurred. Reapply as
Centipedes		necessary to keep pest populations under control,
Crickets		using higher rates as pest pressure increases.
Cutworms		
Earwig		Apply at 7-day intervals if retreatment is
Fleas (adult)		necessary.
Grasshoppers		
Japanese beetles (adult)		Do not apply more than 0.36 lb. of active
Millipedes		ingredient (46 fl. oz. of product) per acre per year.
Mites		
Pillbugs		For spot treatments, use 0.44 fl. oz. of ARC-
Sod webworms		LAMCY 2 per 1-2.5 gals. of water.
Sow bugs		
Ticks (including species		Do not apply when turfgrass is waterlogged or
which transmit Lyme		when soils are saturated with water (i.e., will not
disease)		
Bluegrass billbugs (adult)	6 ml/1,000 sq. ft.	accept irrigation).
Black turfgrass ataenius		
(adult)	(8.8 fl. oz./A)	Keep children and pets off treated areas until spray
Chiggers		has dried following the application.
Fleas (adult)		
Grub (suppression)		See additional instructions below for specific
Hyperodes weevils (adult)		pests.
Mole crickets (nymphs and		
young adults)		
Chinch bugs	12 ml/1,000 sq. ft.	]
Mole crickets (mature adults)		
(Not for use on mature adult	(17.6 fl. oz./A)	

mole crickets and chinch	
bugs in New York State)	

Armyworms, cutworms, fleas, and other Surface Insects: For best results, apply ARC-LAMCY 2 at recommended rates in 2-5 gals. of water per 1,000 sq. ft. If high rainfall amounts are forecast, a spreader-sticker may be useful; otherwise the addition of adjuvants is not necessary under normal conditions for surface insect control in turf. Delay watering or mowing for 12-24 hours for optimum control of surface-feeding insect pests.

**Chinch bugs, billbugs, and other Thatch Inhabiting Insects:** For best results apply ARC-LAMCY 2 at recommended rates in 2-10 gals. of water per 1,000 sq. ft. The use of a nonionic wetting agent, penetrant, or similar adjuvant is recommended at label rates. Irrigate lightly after application with up to  $\frac{1}{2}$  inch of water to move the ARC-LAMCY 2 into the thatch layer. If irrigation is not available, then use high water application rates for optimum results.

**Mole crickets, grubs, and other Subsurface Insects:** For best results apply ARC-LAMCY 2 at recommended rates in 4-10 gals. of water per 1,000 sq. ft. The use of a nonionic wetting agent, penetrant, or similar adjuvant is strongly recommended following label rates. Use the highest water application rates possible with your sprayer. Apply ARC-LAMCY 2 to turf which is wet with dew, rain, or irrigation. Water-in immediately after application with  $\frac{1}{4}$  -  $\frac{1}{2}$  inch of water for optimum results.

**Fire Ants:** Treat individual mounds with a drench application by means of a watering can. Use 0.32 fl. oz. of ARC-LAMCY 2 per 2.5 gals. of water. Thoroughly soak each mound as well as a 3 ft. diameter circle around each mound. Apply the mixture gently to avoid disturbing the mound; disturbing the mound may cause the ants to migrate and reduce the effectiveness of the treatment. For best results, apply in early morning or late evening hours. Make additional treatments if necessary, but not more than every 7 days.

**Mosquitoes:** Apply as a general spray around landscape plantings, turf, and building foundations to control mosquitoes. For best results, apply ARC-LAMCY 2 at recommended rates in 2-5 gals. of water per 1,000 sq. ft.

#### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

**Pesticide Storage**: Store in original containers only. Keep container closed when not in use. Do not store near food or feed. In case of spill or leak on floor or paved surfaces, soak up with sand, earth, or synthetic absorbent. Remove to chemical waste area.

**Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

#### **Container Handling:**

(Nonrefillable container equal to or less than 5 gallons)

Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container <sup>1</sup>/<sub>4</sub> full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

#### (Nonrefillable container greater than 5 gallons)

Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container <sup>1</sup>/<sub>4</sub> full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

# IMPORTANT INFORMATION - READ BEFORE USING PRODUCT

CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions tor Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of ARCANA LLC or Seller. To the extent consistent with state law all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ARCANA LLC and Seller harmless for any claims relating to such factors.

ARCANA LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or ARCANA LLC, and Buyer and User assume the risk of any such use. ARCANA LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent consistent with state law, neither ARCANA LLC nor Seller shall be liable for any incidental, consequential or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ARCANA LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ARCANA, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

ARCANA LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of Sale and Limitation of Warranty and Liability which may not be modified except by written agreement signed by a duly authorized representative of ARCANA LLC.